

# ARPA-E GO COMPETITION POST CHALLENGE 2 EVENT: MONARCH OF THE MOUNTAIN RULES UPDATED 2021-11-22

#### 1. Introduction

The Advanced Research Projects Agency-Energy (ARPA-E) is challenging the research and industrial communities to successfully discover, develop, and test innovative and disruptive software solutions for a variety of critical energy challenges and to overcome existing barriers. This effort begins with the design of a competition, which will provide fair and transparent comparisons of industrially relevant modeling and algorithmic approaches on high-fidelity, open-access, large-scale problems and will provide a platform for the identification of transformational approaches.

The Grid Optimization (GO) Competition Post Challenge 2 Event (named Challenge 2: Monarch of the Mountain or Ch2-MoM), will focus on finding improved solutions to the security-constrained optimal power flow (SCOPF) problem introduced in the Challenge 2 Event.

The broader goal of the GO Competition is to accelerate the development of transformational and disruptive methods for solving problems related to the electric power grid and to provide a transparent, fair, and comprehensive evaluation of new solution methods. In particular, the GO Competition seeks to identify innovative power system optimization and control methods that will accelerate the development and adoption of emerging technologies. Innovative solutions that are identified by the GO Competition will enable increased efficiency, including grid flexibility, reliability, and resilience, and substantially reduce the costs of integrating emerging technologies and resources into the electric power system in the United States.

Challenge 2 required competitors to solve SCOPF problems in a limited amount of time on a High Performance Computing (HPC) system maintained and operated by the GO Administrator. Because these problems are exceedingly difficult to solve and non-convex, there is no guarantee that the competitors have found proven-optimal solutions. The Ch2-MoM competition is meant to further the state of knowledge by eliminating the hardware and time limits to encourage competitors to simply find the best solutions possible for Challenge 2 Datasets.

All relevant GO Competition information, documentation, and access can be found on the GO Competition website (https://gocompetition.energy.gov/).

# 2. Participating in the GO Competition

The term **Entrants** will be used to refer to all participants; Eligible Entrants make up the subset of Entrants that are eligible for awards (see Section 2.A below for the requirements to be eligible for awards). All Entrants will be evaluated against the same criteria and will be placed on the leaderboards. All Entrants agree to the terms and conditions stated in this Rules Document when registering for the GO Ch2-MoM Competition. ARPA-E reserves the right to require additional documentation demonstrating an Entrant's compliance with the rules of the GO Competition at any time. All individuals participating in the GO Competition, whether as individuals or as a member of an Entrant team, will need to be identified and preapproved for participation by ARPA-E. Each individual seeking to participate will be required to fill out, sign, and submit the Individual Member Form (included in the Entrant Form document). Failure to disclose and receive approval from ARPA-E for an individual participating as part of an Entrant or Entrant Team may result in the Entrant or Entrant Team being disqualified from the GO Competition. Challenge 2 Entrants are free to reform their teams for the Ch2-MoM Competition. Challenge 2 Entrants are free to add, remove, or switch individual team members before registration. Challenge 2 Entrants who wish to keep their teams intact may submit a registration renewal.

# A. Eligibility for Awards

Any Entrant that wishes to compete in the GO Competition Challenge 2: Monarch of the Mountain **for awards** must agree and adhere to the following terms and conditions, in order to be classified as an Eligible Entrant. An Eligible Entrant must satisfy the following requirements.

- 1) Each Eligible Entrant team must <u>include and be led by</u> an approved U.S. Entity: a U.S. Citizen, U.S. Permanent Resident, or U.S. Organization. A U.S. Organization (such as a U.S.-based corporation or university) may compete while having employees that are not U.S. Citizens or U.S. Permanent Residents, subject to those individuals being disclosed and preapproved for participation by ARPA-E. An Eligible Entrant team may include Foreign Nationals and foreign entities as team members, subject to disclosure and preapproval by ARPA-E and additional restrictions in Section 2.B. below.
- 2) In lieu of prize money, awards for any Eligible Entrant team that includes one or more team member (individual, organization, or sponsor) located outside the U.S. will be in the form of a grant to perform follow-on research in the United States, subject to successful completion of award negotiations. See https://arpa-e.energy.gov/?q=arpa-e-site-page/pre-award-guidance for more information on grants issued by ARPA-E and the award negotiations process.

<sup>&</sup>lt;sup>1</sup> Individuals or organizations that do not meet requirements to be eligible to receive awards may still participate in the GO Competition by submitting their program for evaluation and they will be placed on the leaderboards. Such non-eligible Entrants must still register through the official GO Competition website and they can be listed on the leaderboard alongside Eligible Entrants.

- 3) An Entrant from an organization that employed individuals funded by ARPA-E to facilitate the design and development for the GO Competition Challenge 2 or to create or validate datasets to be used in the GO Competition Challenge 2 may compete in the GO Competition Challenge 2: Monarch of the Mountain and is eligible for awards.<sup>2</sup> However, ARPA-E will require that an Entrant in this scenario submit a signed affidavit confirming that the Entrant had no assistance from individuals supporting the GO Competition and that no individual supporting the GO Competition is a member of the Entrant team.
- 4) Additional restrictions apply for all Entrants, as stated throughout this Rules Document and by the terms and conditions specified on the GO Competition website.

# **B.** Additional Entrant Restrictions

The following additional restrictions apply to all Entrants.

- 1) The Entrant cannot be a Federal entity<sup>3</sup> and any individual participating on an Entrant team cannot be a Federal employee acting within the scope of his/her employment. A Federal employee acting outside the scope of his or her employment should consult his or her ethics official and must receive approval from his or her supervisor before participating in the GO Competition Challenge 2: Monarch of the Mountain.
- 2) ARPA-E employees and contractors,<sup>4</sup> along with their spouses, dependents, and household members, cannot participate in the GO Competition.
- 3) Any individual, including a DOE Federal employee, prior ARPA-E employee, or individual otherwise working on or supporting the GO Competition Administrator (Pacific Northwest National Laboratory), who has assisted, is assisting, or will assist in the design or operation of the GO Competition, in creation of the GO Competition software platform, or in the evaluation of the Entrant submitted approaches to the GO Competition, cannot participate in Challenge 2: Monarch of the Mountain and their spouses, dependents, and household members cannot participate in Challenge 2: Monarch of the Mountain. 6
- 4) Individuals that are funded by ARPA-E to support the GO Competition Challenge 2 or the GO Competition Challenge 2: Monarch of the Mountain cannot participate in the GO Competition Challenge 2: Monarch of the Mountain. This group includes, but is not limited to, any individual with the specific tasks to create or validate datasets that were

<sup>&</sup>lt;sup>2</sup> For example, if a university has an ARPA-E DE-FOA-0001357 GRID DATA awardee working on dataset generation for the GO Competition Challenge 2, an Entrant from that university may compete in the GO Competition Challenge 2: Monarch of the Mountain so long as each individual from that Entrant team did not receive any assistance from the ARPA-E DE-FOA-0001357 awardee team, from other individuals supporting ARPA-E for the GO Competition Challenge 2 or the Monarch of the Mountain, or have any role in supporting ARPA-E for the GO Competition Challenge 2 or the Monarch of the Mountain.

<sup>&</sup>lt;sup>3</sup> Government Owned Contractor Operator (GOCO) facilities (e.g., a DOE National Laboratory) may participate in the GO Competition as an Entrant that is made up of non-federal employees and/or federal employees, which satisfy the requirements specified in this Rules Document and the terms and conditions posted on the GO Competition website.

<sup>&</sup>lt;sup>4</sup> ARPA-E support contractors include Booz Allen Hamilton, Inc. and Quantitative Scientific Solutions, LLC.

<sup>&</sup>lt;sup>5</sup> This group includes, but is not limited to, specific individuals at Arizona State University, Georgia Institute of Technology, Pacific Northwest National Laboratory, Texas A&M University, and the University of Wisconsin.

<sup>&</sup>lt;sup>6</sup> The GO Competition Administrator and staff may test their own programs on the platform to ensure functionality. During any such testing phase, their programs will be sufficiently identified and displayed on the Leaderboards and then removed for the trials and the Final Event.

- used in the GO Competition Challenge 2 (including certain project awardees funded under APRA-E GRID DATA DE-FOA-0001357).<sup>7,8</sup>
- 5) There will be a GO Competition Challenge 2: Monarch of the Mountain "Benchmark Team," which will be displayed on the leaderboards and it will lead to an open-source SCOPF package that will be made publicly available. This Benchmark Team will not be eligible for any award. The purpose of this Benchmark Team is to validate datasets with an SCOPF package and to lead to an open-source SCOPF tool.
- 6) Any individual that is not a Federal employee that wishes to compete outside of the scope of his/her employment must comply with the rules established by his/her employer.
- 7) An individual, organization, or sponsor located in a Foreign Country of Risk, as designated by DOE,<sup>9</sup> or a country listed on the State Department's list of State Sponsors of Terrorism (<a href="https://www.state.gov/j/ct/list/c14151.htm">https://www.state.gov/j/ct/list/c14151.htm</a>) cannot participate in the GO Competition.
- 8) An individual, organization, or sponsor cannot participate in the GO Competition if they or it are on the Specially Designated Nationals list.<sup>10</sup>

# C. Unique Technological Approach

Each Entrant must submit its own solution files developed from its unique technological approach that has been developed by that Entrant or Entrant team. A unique technological approach is defined as a distinct algorithmic approach. ARPA-E reserves the right to perform technical due diligence to verify that each Entrant's approach represents a unique algorithmic approach; this due diligence may include, but is not limited to, inspection of the underlying source code. Entrants violating this policy will have their submission removed from the GO Competition, will not be placed on the leaderboard, and will not be eligible for awards.

# **D. Entrant Team Members**

Entrants may work alone or with one or more additional individuals or organizations as members of an overall Entrant team. Each Entrant must identify a point of contact, an Entrant Team Leader, for the duration of the GO Competition; please refer to the Entrant forms on the GO Competition website. **Individuals may participate on only one Entrant team.** Similarly, individuals in the same immediate family<sup>12</sup> may not participate on separate Entrant teams. As

<sup>&</sup>lt;sup>7</sup> This group includes, but is not limited to, specific individuals funded by ARPA-E through financial assistance awards with the Georgia Institute of Technology, Pacific Northwest National Laboratory, Texas A&M University, and the University of Wisconsin.

<sup>&</sup>lt;sup>8</sup> If such individuals wish to test their algorithmic approaches on the GO Competition Challenge 2 platform, they may do so only after the GO Competition Challenge 2 has ended and all publicly available datasets have been released to the public. These individuals cannot submit their algorithmic approach at any time before the end of the GO Competition Challenge 2.

<sup>&</sup>lt;sup>9</sup> As of July 2020, Foreign Countries of Risk are China, Russia, Iran, and North Korea

<sup>&</sup>lt;sup>10</sup> Specially Designated Nationals List available at <a href="https://www.treasury.gov/resource-center/sanctions/sdn-list/pages/default.aspx">https://www.treasury.gov/resource-center/sanctions/sdn-list/pages/default.aspx</a>.

<sup>&</sup>lt;sup>11</sup> If inspection is required, it will be performed by ARPA-E Federal employees or authorized ARPA-E contractors who are under an obligation to maintain the material they inspect in confidence.

<sup>&</sup>lt;sup>12</sup> An individual's immediate family includes the individual's parent, spouse, child, step-child, foster child, step-parent, and foster parent.

part of the Entrant Registration form, each entrant team member must certify that they do not have any interests, financial or otherwise, in any other Entrant team or submission to the GO Competition. An organization (e.g., a university or private company) may have multiple Entrant teams but the same individual cannot be on more than one Entrant team.

# E. GO Competition Challenge 2 and Monarch of the Mountain Official Sponsors and Entrant Sponsors

Official sponsors<sup>13</sup> of the GO Competition Challenge 2 and/or the GO Competition Challenge 2: Monarch of the Mountain cannot participate in Challenge 2: Monarch of the Mountain. Entrants may be sponsored by an individual or organization (excluding all official GO Competition sponsors listed on the website).

# F. Entrant Registration

All Entrants must register for the GO Competition. There is no fee for entry. Entrant materials are available on and must be submitted in accordance with the instructions outlined on the GO Competition website. Entrants must be registered on the website with all relevant information submitted to ARPA-E no later than the Registration Deadline for the Monarch of the Mountain event. Entrants registered for Challenge 2 must renew their registration for the Monarch of the Mountain event. The Registration Deadline is described in the Official Challenge 2: Monarch of the Mountain Timeline document available on the GO Competition website.

#### G. Entrant Team Member: Minor

Any minor that wishes to participate in the GO Competition must submit, with his or her registration, a written statement signed by the minor's legal guardian authorizing the minor to participate. See the GO Competition website for the Entrant form for minors.

# 3. GO COMPETITION CHALLENGE 2: MONARCH OF THE MOUNTAIN TIMELINE

The complete timeline of Challenge 2: Monarch of the Mountain is outlined in the GO Competition Challenge 2: Monarch of the Mountain Timeline document on the GO Competition website.

# 4. GO COMPETITION CHALLENGE 2: MONARCH OF THE MOUNTAIN DATA

The Challenge 2: Monarch of the Mountain Competition will utilize the 84 ARPA-E GRID DATA datasets from the GO Competition Challenge 2 Final Event. Separate living leaderboards, with team names and scores, will be maintained for each of these 84 scenarios. Each leaderboard will record and rank the current and past top (highest) scores for each dataset. The first entry on each scenario's leaderboard will be the top score available from the GO Challenge 2 Final

<sup>&</sup>lt;sup>13</sup> The official sponsors include those that have provided financial support (financial sponsors), free software licenses to support the competition (software sponsors), and industry entities providing real-world power system network data that will be used in the trials and final event of the competition (dataset sponsors).

Event. Entrants may submit new solution files each week over the course of the Ch2-MoM competition. Solution files will be evaluated and scored by the publicly available Challenge 2 Evaluation Code. A new score will only be added to the leaderboard if the new solution's score exceeds that of the current best solution. At the conclusion of the Ch2-MoM competition, the current best-known solution files will be posted publicly and available for download. All released datasets can be used with publicly available software.

# 5. Scoring

For scoring information, which is subject to change at different stages of the GO Competition Challenge 2: Monarch of the Mountain, see the GO Competition website and associated scoring document.

Scoring will be automated through the GO Competition platform (i.e., no person will be directly judging solution files). The Monarch of the Mountain competition will use the software used to determine the scores for the Entrants' submissions in GO Competition Challenge 2. This software is available on the GO Competition website as an open-source software package.

#### 6. AWARDS FOR ELIGIBLE ENTRANTS

Subject to the availability of funds, awards will be made to the top Eligible Entrants (see Section 2.A for general eligibility requirements in Challenge 2: Monarch of the Mountain of the GO Competition). Awards will be in the form of prize money, subject to the conditions described in Section 2.A.2 above for teams that include team members located outside the United States. Prize money will be distributed to the Eligible Entrant. The allocation of any prize among and between team members is the responsibility of the Entrant. ARPA-E will not arbitrate, intervene, advise on, or resolve any matters between Entrant team members.

There will be only one scoring division in the GO Competition Challenge 2: Monarch of the Mountain, based on an untimed version of the Challenge 2 Division 4 Problem Formulation. All Entrants may utilize any optimization features allowable in Division 4 of the GO Competition Challenge 2 including topology optimization. Unlike Challenge 2 (when Entrants submitted their algorithms to the GO Competition), Entrants in the Ch2-MoM competition will run their algorithms in an external environment and submit only the solution files to the GO Competition Administrator. These solution files must match the form and requirements of the Challenge 2 Problem Formulation available on the GO Competition website.

Entrants may submit new solutions to each scenario during the Ch2-MoM Competition. However, Each Entrant may submit only one set of solution files for each scenario once per competition week. At the conclusion of each competition week, the GO Competition Administrator will evaluate all new submissions simultaneously and post any new top scores on the leaderboards at the start of the following competition week. The schedule for the weekly submission deadline and leaderboard updates is available in the Official Challenge 2: Monarch of the Mountain Timeline document available on the GO Competition website.

There will be a separate leaderboard for each scenario. Each leaderboard will track the current and past top scores for each scenario and the length of time each solution remains at the top rank (in competition weeks).

At the end of the competition, prize-eligible Entrants may receive awards for performance in the Ch2-MoM Competition. Prizes will be awarded separately for each scenario. There are two awards available for each scenario. A prize will only be awarded for a scenario if an Eligible Entrant has submitted a solution with a higher score than the previously known top score from the Challenge 2 Final Event (solutions from the Challenge 2 Final Event are not eligible for awards in the Ch2-MoM Competition). At the end of the competition, Eligible Entrants with the top score on a scenario leaderboard may receive a \$5,000 award per scenario. To qualify for this award, the top score must also be at least 1% greater than the top score from the Challenge 2 Final Event. Additionally, one bonus prize of \$5,000 will be awarded for each scenario to whichever Eligible Entrant held the top rank of that scenario's leaderboard for the greatest number of competition weeks (need not be consecutive). In the event of a tie, whichever Entrant with the highest final score between the tied Entrants will win the bonus prize. An Entrant may earn one or both prizes for each scenario and may win prizes for more than one scenario.

# 7. Full Automation Requirement

All Entrants are required to submit solutions files developed through their own work. Violation of these rules during submission will result in Entrant team disqualification and further actions as appropriate under Federal law and regulation. ARPA-E will preserve the integrity of the GO Competition with safeguards to be developed during the program. These safeguards will not be shared as sharing may cause the methods to be ineffective. For this reason, all safeguard inspection schedules, methods, and capabilities will not be disclosed to any Entrant for any reason. Any information regarding human interference during any submission event should be sent to the GO Competition Administrator (Pacific Northwest National Laboratory) at <a href="mailto:arpacomp@pnnl.gov">arpacomp@pnnl.gov</a>.

# 8. INTELLECTUAL PROPERTY, PROPRIETARY SOFTWARE, AND TRADEMARKS

Neither ARPA-E nor the GO Competition Administrator or its affiliates may gain an interest in the intellectual property (IP) submitted to the GO Competition without the written consent of the Entrant or to the extent provided in an award made to an Entrant to participate in Challenge 2: Monarch of the Mountain per the terms of any financial assistance agreement with ARPA-E.

Entrants shall specifically identify any proprietary data or information included in their entry with the marking "PROPRIETARY INFORMATION OF [ENTRANT'S NAME]" to notify ARPA-E and the GO Competition Administrator that the specified information should not be released to the public. Absent the written consent of the Entrant, neither ARPA-E nor the GO Competition Administrator shall disclose any of the Entrant's marked proprietary information to a third

party, except as required by law, statute, or regulation. By submitting an entry, Entrant understands and expressly agrees that ARPA-E and the GO Competition Administrator may use, review and permit the inspection of entry information by others who are obligated to treat the information in confidence—including the United States Department of Energy—as a part of assuring the safe and efficient operation of PNNL and for review purposes under the GO Competition.

Entrants may choose to be listed as an Anonymous Entrant;<sup>14</sup> when disseminating GO Competition Challenge 2: Monarch of the Mountain results from Anonymous Entrants, ARPA-E and the GO Competition Administrator will mask all specific team information and instead report the results anonymously. This rule applies to postings on the leaderboards and any other reporting conducted by ARPA-E and the GO Competition Administrator to publish the GO Competition Challenge 2: Monarch of the Mountain results. Anonymous Entrants are not prize eligible.

ARPA-E reserves the right to display each Entrant's scores (across all scenarios) publicly; see the Scoring document on the GO Competition website for more information on the scoring mechanisms and divisions. Each Entrant agrees to the placement of the Entrant name or team name on the leaderboards by the GO Competition Administrator. ARPA-E, the GO Competition Administrator, and others acting on their behalf reserve the right to prepare and publicly disseminate reports based on the outcomes of Challenge 2: Monarch of the Mountain. ARPA-E reserves the right to disseminate detailed power flow results (i.e. solution files); the detailed power flow results will not convey any proprietary information.

# 9. Additional Information

The discovery of revolutionary technologies is a key objective of the GO Competition. Entrants are invited to communicate directly with ARPA-E and the GO Competition Administrator regarding any rule that restricts their ability to demonstrate technical achievement and innovative solutions. Questions regarding rules should be sent to <a href="mailto:arpacomp@pnnl.gov">arpacomp@pnnl.gov</a>; general questions and answers will be posted on the GO Competition FAQ section of the website.

ARPA-E may modify these rules at any time and for any reason. Consult the GO Competition website and the most up-to-date Rules Document.

Entrant information collected by ARPA-E will be used solely for the purpose of administering the GO Competition. Use of Entrant information is governed by the Privacy Policy posted on the GO Competition website.

<sup>&</sup>lt;sup>14</sup> When registering for Challenge 2: Monarch of the Mountain, an Entrant can indicate that they wish to be listed as Anonymous on its official Entrant Form. Entrants may change their Anonymous status at any time by filling out a Change of Entrant Form (subject to the deadline to submit the Change of Entrant Form). Both the Entrant Form and Change of Entrant Form are available on the GO Competition website.

<sup>&</sup>lt;sup>15</sup> Entrants choosing to be anonymous will not have their specific information disclosed; rather, they will be listed as an Anonymous Entrant on the leaderboards.

Entrants may be listed on the GO Competition website to enable the event to be tracked by interested members of the public. The names and photographs of Entrant team members may be posted on the ARPA-E website and released to the media. It is the responsibility of the Entrant that appropriate releases have been obtained from anyone whose photograph is submitted to ARPA-E by the Entrant.

In addition, except where prohibited, participation in the competition constitutes each Entrant's consent to DOE's and its agents' use of each Entrant's name, likeness, photograph, voice, opinions, and/or hometown and state information for promotional purposes through any form of media, worldwide, without further permission, payment or consideration; the only exception to this policy is when the Entrant lists that they wish to remain anonymous.

ARPA-E reserves the right to disqualify an Entrant whose actions are deemed to violate these rules or the spirit of the GO Competition for any reason, including but not limited to, the violation of relevant laws or regulations during participation in the GO Competition. No appeal is allowed and the decision is at the sole discretion of ARPA-E.

By registering for and/or participating in the GO Competition Challenge 2: Monarch of the Mountain, Entrants agree to follow these rules. Entrants must agree to assume any and all risks and waive claims against the Federal Government, its related entities, and the GO Competition Administrator and its affiliates, except in the case of willful misconduct, for any injury, death, damage, or loss of property, revenue, or profits, whether direct, indirect, or consequential, arising from participation in the GO Competition, whether the injury death, damage, or loss arises through negligence or otherwise.

Questions regarding the rules, privacy policy, or other aspects of the GO Competition may be directed to arpacomp@pnnl.gov.

# 10. SCOPE AND PRECEDENCE

The rules outlined herein apply to all Entrants in the GO Competition Challenge 2: Monarch of the Mountain. However, nothing in these rules, included in this document and any subsequent GO Competition Challenge 2: Monarch of the Mountain Rules Documents, may be interpreted as modifying the statement of work or authorizing work outside the terms and conditions of any existing agreements or contracts with ARPA-E.

ARPA-E may release additional documents with rules updates, procedures, and other information for Entrants. Unless otherwise stated in writing, any additional documents carry the full authority of the rules in this document.

All documents, including this Rules Document, will be posted and updated on the GO Competition website (https://gocompetition.energy.gov/). All GO Competition documents

including these rules should be considered living documents, subject to update and clarification throughout the GO Competition.

# 11. GENERAL CONDITIONS

ALL DECISIONS BY ARPA-E ARE FINAL AND BINDING IN ALL MATTERS RELATED TO THE GO COMPETITION.

ARPA-E reserves the right to cancel, suspend, and/or modify the GO Competition, any part of the GO Competition, or any associated events or funding opportunities at ARPA-E's sole discretion. Considerations may include availability of funds and technical viability, or if any fraud, technical failures, or any other factor beyond ARPA-E's reasonable control impairs the integrity or proper functioning of the GO Competition. ARPA-E is not responsible for, nor is it required to accept, incomplete, late, misdirected, damaged, corrupted, unlawful, or illicit submissions.

ARPA-E does not authorize or consent to an Entrant infringing on any U.S. patent or copyright while participating in the GO Competition. No illegal activities may be undertaken for the purpose of participation in the GO Competition.

# A. Entrant Representations and Warranties

Upon registration, Entrant hereby represents and warrants on its behalf and on behalf of all team members, that:

- It is the sole author and copyright owner of the algorithm or methods used to produce its solution files to the problems presented in the Competition; that the submission is an original work of the Entrant and/or that the Entrant has sufficient rights to use and to authorize others, including ARPA-E, to use the submission, as specified throughout the Rules Document; that the submission does not infringe upon any U.S. patent, copyright, or upon any other third party rights of which the Entrant is aware; and that the submission is free of malware;
- The submission, and any use thereof by ARPA-E is not defamatory or libelous in any manner; does not constitute or result in any misappropriation or other violation of the publicity rights or right of privacy of any person or entity, or infringe, misappropriate or otherwise violate any intellectual property rights, privacy rights, or any other rights of any person or entity;
- It is free to enter into this competition without the consent of any third party (unless the Entrant is required to obtain a written consent from a third party by the terms and conditions established for the GO Competition, e.g., a minor must provide the written consent of a legal guardian to participate) and has the capability to fully perform its obligations as stipulated by the Rules Document;
- If the Entrant is a U.S. Organization, it is validly existing and duly organized in the state or jurisdiction of its incorporation;

- It is not a party to (and it agrees that it shall not become a party to) any agreement, obligation, or understanding that is inconsistent with the Rules Document or might limit or impair the ARPA-E's rights or the Entrant's obligations under the GO Competition Rules Document;
- There is no suit, proceeding, or any other claim pending or threatened against the
  Entrant, nor does any circumstance exist, to its knowledge, which may be the basis of
  any such suit, proceeding, or other claim, that could limit or impair the Entrant's
  performance of its obligations pursuant to GO Competition Rules Document;
- It will not infringe, violate, or interfere with the intellectual property, publicity, privacy, contract or other right of any third party in the course of its participation in the GO Competition or cause ARPA-E or the GO Competition Administrator or its affiliates to do any of the same;
- It will comply with all applicable laws, rules, and regulations in performing under these rules;
- It meets the terms and conditions specified in the GO Competition Rules Document to be an Entrant and, if the Entrant is seeking an award, it further satisfies the eligibility requirements to be classified as an "Eligible Entrant."

# **B.** Government Representations and Warranties

Any and all information provided by or obtained from the Federal Government is without any warranty or representation whatsoever including, but not limited to, its suitability for any particular purpose.

# C. Personally Identifiable Information

Unless otherwise required, all information provided by the Entrant must not include any Personally Identifiable Information (PII). PII refers to information which can be used to distinguish or trace an individual's identity, such as the individual's name, social security number, date and place of birth, residence, personal telephone or cell phone number, or any other information this is linked or linkable to an individual such as employment information.

# **D.** Relationship of the Parties

Nothing contained in this Rules Document is intended to create or constitute a relationship between ARPA-E or the GO Competition Administrator or its affiliates with the Entrants. Participation in the GO Competition does not constitute or imply any form of sanction or support or endorsement of the Entrant by ARPA-E or the GO Competition Administrator or its affiliates, nor does it grant any party any authority to act as agent, nor assume or create any obligation, on behalf of another party. An Entrant may not use the ARPA-E or DOE logos or official seals in their submission. APRA-E reserves the right to use Entrant names and images for publicizing the GO Competition and results.

#### E. Trademark License

GO Competition and any associated nicknames and logos ("Competition Marks") are trademarks owned by the U.S. Department of Energy. The trademark license granted to Entrants is below. Non-Entrants can request individualized trademark licenses (for the purpose of engaging with Entrants and/or expressing interest in the technology); the decision to grant such licenses is under the sole discretion of ARPA-E.

Entrants are granted, for the duration of the GO Competition, a revocable, non-exclusive, royalty-free license to use the Competition Marks for the purposes of producing materials for the competition and other approved competition-related activities as long as the use does not suggest or imply endorsement of the Entrant by ARPA-E or the U.S. Department of Energy, and the use of the Competition Marks by a Entrant does not imply the endorsement, recommendation, or favoring of the Entrant by ARPA-E or the Department of Energy.

Entrants may not use the Competition Marks for any other purpose. Entrants may not sublicense the Competition Marks.

Challenge 2: Monarch of the Mountain winners will be provided with an individualized trademark license for ongoing use of the Competition Marks once the competition winners have been declared. All Entrants can request individualized trademark licenses; the decision to grant such requests is under the sole discretion of ARPA-E.